

AMENDMENTS TO THE CLAIMS

1-32. (Cancelled)

33. (Previously Presented) A light emitting diode (LED) comprising:

a first gallium nitride layer;

an $\text{In}_x\text{Ga}_{1-x}\text{N}/\text{In}_y\text{Ga}_{1-y}\text{N}$ multi-layer formed over the first gallium nitride layer;

an active layer formed over the $\text{In}_x\text{Ga}_{1-x}\text{N}/\text{In}_y\text{Ga}_{1-y}\text{N}$ multi-layer; and

a second gallium nitride layer formed over the active layer,

wherein the $\text{In}_x\text{Ga}_{1-x}\text{N}/\text{In}_y\text{Ga}_{1-y}\text{N}$ multi-layer has a plurality of pits formed thereon.

34. (Previously Presented) The LED according to claim 33, wherein the active layer comprises an $\text{InGaN}/\text{InGaN}$ structure of a multi-quantum well structure.

35. (Cancelled)

36. (Previously Presented) The LED according to claim 33, wherein the number of the pits is 50 or less per area of $5\mu\text{m}\times 5\mu\text{m}$.

37. (Previously Presented) The LED according to claim 33, wherein the $\text{In}_x\text{Ga}_{1-x}\text{N}/\text{In}_y\text{Ga}_{1-y}\text{N}$ multi-layer is formed to have a super lattice structure.

38. (Previously Presented) The LED according to claim 33, wherein each layer of the $\text{In}_x\text{Ga}_{1-x}\text{N}/\text{In}_y\text{Ga}_{1-y}\text{N}$ multi-layer has a thickness of 1~3000 Å.

39. (Previously Presented) The LED according to claim 33, wherein the $\text{In}_x\text{Ga}_{1-x}\text{N}/\text{In}_y\text{Ga}_{1-y}\text{N}$ multi-layer has a photoluminescence characteristic of a yellow band intensity/N-doped GaN intensity ratio of 0.4 or below.

40. (Previously Presented) The LED according to claim 33, wherein the active layer is directly formed on the $\text{In}_x\text{Ga}_{1-x}\text{N}/\text{In}_y\text{Ga}_{1-y}\text{N}$ multi-layer

41. (Previously Presented) The LED according to claim 33, wherein the LED is blue LED.

42. (Previously Presented) A method for manufacturing a light emitting device, the method comprising the steps of:

forming an N-type gallium nitride layer;

forming an $\text{In}_x\text{Ga}_{1-x}\text{N}/\text{In}_y\text{Ga}_{1-y}\text{N}$ multi-layer above the N-type gallium nitride layer, the $\text{In}_x\text{Ga}_{1-x}\text{N}/\text{In}_y\text{Ga}_{1-y}\text{N}$ multi-layer including layers of first and second growth temperatures;

forming an active layer above the $\text{In}_x\text{Ga}_{1-x}\text{N}/\text{In}_y\text{Ga}_{1-y}\text{N}$ multi-layer; and

forming a P-type gallium nitride layer above the active layer,

wherein the active layer is grown at a temperature lower than the first and second temperatures, and

wherein the $\text{In}_x\text{Ga}_{1-x}\text{N}/\text{In}_y\text{Ga}_{1-y}\text{N}$ multi-layer has a plurality of pits formed thereon.

43. (Previously Presented) The method according to claim 42, wherein the active layer is grown at 600~800 °C.

44. (Previously Presented) The method according to claim 42, wherein the active layer comprises an $\text{InGaN}/\text{InGaN}$ structure of a multi-quantum well structure.

45. (Cancelled)

46. (Previously Presented) The method according to claim 42, wherein the number of the pits is 50 or less per area of $5\mu\text{m}\times 5\mu\text{m}$.

47. (Previously Presented) The method according to claim 42, wherein the $\text{In}_x\text{Ga}_{1-x}\text{N}/\text{In}_y\text{Ga}_{1-y}\text{N}$ multi-layer is formed to have a super lattice structure.

48. (Previously Presented) The method according to claim 42, wherein each layer of the $\text{In}_x\text{Ga}_{1-x}\text{N}/\text{In}_y\text{Ga}_{1-y}\text{N}$ multi-layer has a thickness of 1~3000 Å.

49. (Previously Presented) The method according to claim 42, wherein the $\text{In}_x\text{Ga}_{1-x}\text{N}/\text{In}_y\text{Ga}_{1-y}\text{N}$ multi-layer has a photoluminescence characteristic of a yellow band intensity/N-doped GaN intensity ratio of 0.4 or below.

50. (Previously Presented) The method according to claim 42, wherein the active layer is directly formed on the $\text{In}_x\text{Ga}_{1-x}\text{N}/\text{In}_y\text{Ga}_{1-y}\text{N}$ multi-layer.

51. (New) A light emitting diode (LED), comprising:
a substrate;
a buffer layer on the substrate;
an undoped GaN layer on the buffer layer;
an N-type GaN layer directly formed on the undoped GaN layer;
an $\text{In}_x\text{Ga}_{1-x}\text{N}/\text{In}_y\text{Ga}_{1-y}\text{N}$ multi-layer directly formed on the N-type GaN layer;
an active layer directly formed on the $\text{In}_x\text{Ga}_{1-x}\text{N}/\text{In}_y\text{Ga}_{1-y}\text{N}$ multi-layer; and
a P-type GaN layer formed on the active layer,
wherein the $\text{In}_x\text{Ga}_{1-x}\text{N}/\text{In}_y\text{Ga}_{1-y}\text{N}$ multi-layer has a plurality of pits formed thereon.

52. (New) The LED according to claim 51, further comprising:
a GaN layer between the buffer layer and the undoped GaN layer.

53. (New) The LED according to claim 53, wherein the undoped GaN layer is directly formed on the GaN layer.

54. (New) The LED according to claim 51, wherein the active layer comprises:
an InGaN/InGaN structure of a multi-quantum well structure.